

Having described the invention, the following is claimed:

1. An apparatus for use in storing and positioning keys, said apparatus comprising:
 - a housing,
 - a first key mounted for pivotal movement relative to said housing, said first key being pivotal between a stored condition disposed adjacent to said housing and an active condition extending away from said housing,
 - a second key mounted for pivotal movement relative to said housing, said second key being pivotal between a stored condition disposed adjacent to said housing and an active condition extending away from said housing,
 - a third key mounted for pivotal movement relative to said housing, said third key being pivotal between a stored condition disposed adjacent to said housing and an active condition extending away from said housing, and
 - a fourth key mounted for pivotal movement relative to said housing, said fourth key being pivotal between a stored condition disposed adjacent to said housing and an active condition extending away from said housing.

2. An apparatus as set forth in claim 1 wherein said housing has a first slot extending along a first side of said housing and a second slot extending along a second side of said housing, said first key being disposed in said first slot when said first key is in the stored condition, said first key extends away from said first slot when said first key is in the active condition, said second key being disposed in said first slot when said second key is in the stored condition, said second key extends away from said first slot when said second key is in the active condition, said third key being disposed in said second slot when said third key is in the stored condition, said third key extends away from said second slot when said third key is in the active condition, said fourth key being disposed in said second slot when said fourth key is in the stored condition, said fourth key extends away from said second slot when said fourth key is in the active condition.

3. An apparatus as set forth in claim 2 further including a first actuator assembly disposed adjacent to a first end portion of said first slot, said first actuator assembly being manually actuatable to effect movement of said first key from the stored condition to the active condition, a second actuator assembly disposed adjacent to a second end portion of said first slot, said second actuator assembly being manually actuatable to effect movement of said second key from the stored condition to the active condition, a third actuator assembly disposed adjacent to a first end portion of said second slot,

said third actuator assembly being manually actuatable to effect movement of said third key from the stored condition to the active condition, and a fourth actuator assembly disposed adjacent to a second end portion of said second slot, said fourth actuator assembly being manually actuatable to effect movement of said fourth key from the stored condition to the active condition.

4. An apparatus as set forth in claim 3 wherein said housing includes a major side which extends between said first and second sides of said housing, each of said actuator assemblies includes a manually engagable member which is disposed adjacent to said major side of said housing.

5. An apparatus as set forth in claim 2 wherein said first key extends along a side of said second key when said first and second keys are in the stored condition in said first slot, and said third key extends along a side of said fourth key when said third and fourth keys are in the stored condition in said second slot.

6. An apparatus as set forth in claim 2 wherein said first key is movable between first and second active positions, said first key extends transverse to a longitudinal axis of said first slot when said first key is in the first active position, said first key extends parallel to the longitudinal axis of said first slot when said first key is in the second active position, said second key is movable between third and fourth active positions, said second key

extends transverse to a longitudinal axis of said first slot when said second key is in the third active position, said second key extends parallel to the longitudinal axis of said first slot when said second key is in the fourth active position, said third key is movable between fifth and sixth active positions, said third key extends transverse to a longitudinal axis of said second slot when said third key is in the fifth active position, said third key extends parallel to the longitudinal axis of said second slot when said third key is in the sixth active position, said fourth key is movable between seventh and eighth active positions, said fourth key extends transverse to a longitudinal axis of said second slot when said fourth key is in the seventh active position, said fourth key extends parallel to the longitudinal axis of said second slot when said fourth key is in the eighth active position.

7. An apparatus as set forth in claim 2 further including a first key retainer which is at least partially disposed in a first end portion of said first slot and is connected with said first key, said first key retainer being pivotal relative to said housing from a stored condition to an active condition to move said first key from its stored condition to its active condition, a second key retainer which is at least partially disposed in a second end portion of said first slot and is connected with said second key, said second key retainer being pivotal relative to said housing from a stored condition to an active condition to move said second key from its stored condition to its active

condition, and a third key retainer which is at least partially disposed in a first end portion of said second slot and is connected with said third key, said third key retainer being pivotal relative to said housing from a stored condition to an active condition to move said third key from its stored condition to its active condition, a fourth key retainer which is at least partially disposed in a second end portion of said second slot and is connected with said fourth key, said fourth key retainer being pivotal relative to said housing from a stored condition to an active condition to move said fourth key from its stored condition to its active condition.

8. An apparatus as set forth in claim 1 further including a remote keyless entry device releasably connected with said housing.

9. An apparatus as set forth in claim 1 wherein said housing has first and second sides, a first actuator disposed adjacent to said first side of housing, said first actuator being manually actuatable to effect movement of said first key between the stored condition and the active condition, a second actuator disposed adjacent to said first side of said housing, said second actuator being manually actuatable to effect movement of said second key between the stored condition and the active condition, a third actuator disposed adjacent to said first side of said housing, said third actuator being manually actuatable to effect movement of said third key between the stored condition and the active condition, a fourth actuator disposed adjacent to said

first side of said housing, said fourth actuator being manually actuatable to effect movement of said fourth key between the stored condition and the active condition, and a remote keyless entry unit disposed adjacent to said second side of said housing.

10. An apparatus as set forth in claim 1 further including a first key identifier connected with said first key and visible when said first key is in the stored condition to facilitate identification of said first key, a second key identifier connected with said second key and visible when said second key is in the stored condition to facilitate identification of said second key, a third key identifier connected with said third key and visible when said third key is in the stored condition to facilitate identification of said third key, and a fourth key identifier connected with said fourth key and visible when said fourth key is in the stored condition to facilitate identification of said fourth key.

11. An apparatus for storing and positioning a key, said apparatus comprising:

a housing,

a key retainer connected with and pivotal relative to said housing between a stored position and an active position,

a key having an end portion connected with said key retainer and a shank portion extending from said end portion of said key, said shank portion of said key being disposed in said housing when said key retainer is in

the stored position, said shank portion of said key extends away from said housing when said key retainer is in the active position,

a spring which urges said key retainer away from the stored position, and

a control member which is movable between an initial position in which said key retainer is retained in the stored position against the influence of said spring and a release position in which said key retainer is released for movement from the stored position to the active position under the influence of said spring.

12. An apparatus as set forth in claim 11 wherein said key retainer is pivotal relative to said housing between the stored position and a second active position, said shank portion of said key extends away from said housing when said key retainer is in the second active position.

13. An apparatus as set forth in claim 11 wherein said control member is disposed in engagement with a retaining surface connected with said housing when said control member is in the initial position and when said control member is in the release position, said control member being disposed in engagement with a first surface connected with said key retainer when said key retainer is in the stored position, said control member being disposed in engagement with a second surface connected with said key retainer when said key retainer is in the active position.

14. An apparatus as set forth in claim 11 wherein said key retainer is pivotal relative to said housing about a pivot axis which extends through said control member, said control member being movable along said pivot axis between an initial position and a release position.

15. An apparatus as set forth in claim 11 wherein said shank portion of said key extends transverse to a longitudinal axis of said housing when said key retainer is in the active position.

16. An apparatus as set forth in claim 11 wherein said shank portion of said key extends parallel to a longitudinal axis of said housing when said key retainer is in the active position.

17. An apparatus as set forth in claim 11 wherein said housing includes a slot having first and second end portions, said key retainer being pivotal relative to said housing about an axis extending through the first end portion of said slot, said apparatus further includes a second key retainer which is pivotal relative to said housing about an axis extending through the second end portion of said slot, and a second key having an end portion connected with said second key retainer and a shank portion extending from said end portion of said second key.

18. An apparatus as set forth in claim 11 further including a magnet disposed in said housing to attract a unit to be connected with said apparatus.

19. An apparatus as set forth in claim 11 wherein said key retainer includes a socket which encloses said end portion of said key, said key retainer being pivotal about an axis which is spaced from said socket.

20. An apparatus as set forth in claim 19 further including a member which engages said end portion of said key and urges said end portion of said key toward an end portion of said socket.

21. An apparatus as set forth in claim 11 wherein said housing includes first and second recesses disposed in opposite sides of said housing, each of said recesses having an arcuate side surface, said key retainer having first and second projections which extend from opposite sides of said key retainer, said first projection being at least partially disposed in said first recess, said first projection having an arcuate side surface which engages said arcuate side surface of said first recess, said second projection being at least partially disposed in said second recess, said second projection having an arcuate side surface which engages said arcuate side surface of said second recess.

22. An apparatus as set forth in claim 11 further including a remote keyless entry device releasably connected with said housing.

23. An apparatus as set forth in claim 11 wherein said housing has first and second sides, said control member having a manually engagable end portion which is disposed adjacent to said first side of said housing, said

apparatus further includes a remote keyless entry device disposed adjacent to said second side of said housing.

24. An apparatus as set forth in claim 23 further including a magnet connected with said housing to magnetically attract said remote keyless entry device and to hold the remote keyless entry device in engagement with said second side of said housing.

25. An apparatus for storing and positioning a key, said apparatus comprising

a housing having first and second major sides extending between minor sides of said housing,

a slot having an opening in one of said minor sides of said housing,

a key mounted for pivotal movement relative to said housing, said key being pivotal between a stored condition disposed in said slot and an active condition extending away from said slot,

an actuator assembly connected with said housing and including a manually engageable actuator member which is manually movable relative to said housing to effect movement of said key from the stored condition to the active condition, and

a magnet connected with said housing to magnetically attract a unit to be connected with said apparatus and to hold the unit in engagement with one of said major sides of said housing.

26. An apparatus as set forth in claim 25 wherein said actuator assembly includes a spring which urges said key away from the stored condition, said actuator member being manually movable between an initial position in which said key is retained in the stored condition against the influence of said spring and a release position in which said key is released for movement from the stored condition to the active condition under the influence of said spring.

27. An apparatus as set forth in claim 26 further including an index surface on said one major side of said housing, said index surface being engagable with an index surface on said unit to position said unit relative to said housing.

28. An apparatus as set forth in claim 25 further including a key retainer at least partially disposed in said slot, said key having an end portion connected with said key retainer and a shank portion extending from said end portion of said key, a spring which urges said key retainer to pivot relative to said housing to move said key from said stored condition in which said shank portion of said key is disposed in said slot toward said active condition in which said shank portion of said key extends away from said slot.

29. An apparatus as set forth in claim 25 wherein said unit to be connected with said housing is a remote keyless entry device.

30. An apparatus for use in storing and positioning keys, said apparatus comprising:

a housing,

a first key retainer at least partially disposed in said housing and mounted for pivotal movement about a first axis extending through a first end portion of said housing, said first key retainer being pivotal about said first axis between a first stored position and a first active position,

a first key having an end portion connected with said first key retainer and a shank portion extending from said end portion of said first key, said first key being pivotal about said first axis with said first key retainer during movement of said first key retainer between the first stored position and the first active position,

a second key retainer at least partially disposed in said housing and mounted for pivotal movement about a second axis extending through a second end portion of said housing, said second key retainer being pivotal about said second axis between a second stored position and a second active position, and

a second key having an end portion connected with said second key retainer and a shank portion extending from said end portion of said

second key, said second key being pivotal about said second axis with said second key retainer during movement of said second key retainer between the second stored position and the second active position, said shank portions of said first and second keys being disposed in a side-by-side relationship when said first key retainer is in the first stored position and said second key retainer is in the second stored position.

31. An apparatus as set forth in claim 30 wherein said end portion of said first key is spaced from said first axis and said end portion of said second key is spaced from said second axis.

32. An apparatus as set forth in claim 30 further including a magnet connected with said housing to attract a unit to be connected with said apparatus and to hold the unit in engagement with said housing.

33. An apparatus as set forth in claim 30 further including a third key retainer being at least partially disposed in said housing and mounted for pivotal movement about a third axis extending through the first end portion of said housing, said third key retainer being pivotal about said third axis between a third stored position and a third active position, a third key having an end portion connected with said third key retainer and a shank portion extending from said end portion of said third key, said third key being pivotal about said third axis with said third key retainer during movement of said third key retainer between the third stored position and the third active

position, a fourth key retainer at least partially disposed in said housing and mounted for pivotal movement about a fourth axis extending through the second end portion of said housing, said fourth key retainer being pivotal about said fourth axis between a fourth stored position and a fourth active position, and a fourth key having an end portion connected with said fourth key retainer and a shank portion extending from said end portion of said fourth key, said fourth key being pivotal about said fourth axis with said fourth key retainer during movement of said fourth key retainer between the fourth stored position and the fourth active position, said shank portions of said third and fourth keys being disposed in a side-by-side relationship in said housing when said third key retainer is in the third stored position and said fourth key retainer is in the fourth stored position.

34. An apparatus as set forth in claim 33 wherein said end portion of said first key is spaced from said first axis, said end portion of said second key is spaced from said second axis, said end portion of said third key is spaced from said third axis, and said end portion of said fourth key is spaced from said fourth axis.

35. An apparatus as set forth in claim 33 further including a first actuator assembly disposed in alignment with said first axis, said first actuator assembly being manually actuatable to effect movement of said first key retainer about the first axis from the first stored position to the first active

position, a second actuator assembly disposed in alignment with said second axis, said second actuator assembly being manually actuatable to effect movement of said second key retainer about the second axis from the second stored position to the second active position, a third actuator assembly disposed in alignment with said third axis, said third actuator assembly being manually actuatable to effect movement of said third key retainer about the third axis from the third stored position to the third active position, and a fourth actuator assembly disposed in alignment with said fourth axis, said fourth actuator assembly being manually actuatable to effect movement of said fourth key retainer about said fourth axis from the fourth stored position to the fourth active position.

36. An apparatus as set forth in claim 35 wherein said housing includes a major side, each of said actuator assemblies includes a manually engagable member which is disposed adjacent to said major side of said housing.

37. An apparatus as set forth in claim 30 further including a first spring which urges said first key retainer away from the first stored position, a first control member which is movable between a first engaged position in which said first key retainer is retained in the first stored position against the influence of said first spring and a first release position in which said first key retainer is released for movement from the first stored position to the first

active position under the influence said first spring, a second spring which urges said second key retainer away from the second stored position, a second control member which is movable between a second engaged position in which said second key retainer is retained in the second stored position against the influence of said second spring and a second release position in which said second key retainer is released for movement from the second stored position to the second active position under the influence of said second spring.

38. An apparatus as set forth in claim 37 wherein said first control member is disposed in engagement with a first retaining surface connected with said housing when said first control member is in the first engaged position and when said first control member is in the first release position, said first control member being disposed in engagement with a first surface connected with said first key retainer when said first key retainer is in the first stored position, said first control member being disposed in engagement with a second surface connected with said first key retainer when said first key retainer is in the first active position, said second control member is disposed in engagement with a second retaining surface connected with said housing when said second control member is in the second engaged position and when said second control member is in the second release position, said second control member being disposed in engagement with a first surface

connected with said second key retainer when said second key retainer is in the second stored position, said second control member being disposed in engagement with a second surface connected with said second key retainer when said second key retainer is in the second active position.

39. An apparatus as set forth in claim 38 wherein said first control member is manually movable along said first axis in a first direction to move said first control member from the first engaged position to the first release position, said second control member is manually movable along said second axis in the first direction to move said second control member from the second engaged position to the second release position.

40. An apparatus as set forth in claim 30 wherein said shank portion of said first key extends transverse to a longitudinal axis of said housing when said first key retainer is in said first active position and said shank portion of said second key extends transverse to the longitudinal axis of said housing when said second key retainer is in the second active position.

41. An apparatus as set forth in claim 30 wherein said shank portion of said first key extends parallel to a longitudinal axis of said housing when said first key retainer is in said first active position and said shank portion of said second key extends parallel to the longitudinal axis of said housing when said second key retainer is in said second active position.

42. An apparatus as set forth in claim 30 wherein said housing includes first and second arcuate support surfaces disposed adjacent opposite sides of said first key retainer and having centers of curvature coincident with said first axis, said first key retainer includes a first arcuate bearing surface disposed in engagement with said first arcuate support surface and a second arcuate bearing surface disposed in engagement with said second arcuate support surface, said first and second arcuate bearing surfaces cooperating with said first and second arcuate support surfaces to support said first key retainer and said first key for pivotal movement relative to said housing, said housing includes third and fourth arcuate support surfaces disposed adjacent to opposite sides of said second key retainer and having centers of curvature coincident with said second axis, said second key retainer includes a third arcuate bearing surface disposed in engagement with said third arcuate support surface and a fourth arcuate bearing surface disposed in engagement with said fourth arcuate support surface, said third and fourth arcuate bearing surfaces cooperating with said third and fourth arcuate support surfaces to support said second key retainer and said second key for pivotal movement relative to said housing.

43. An apparatus as set forth in claim 30 further including a first key identifier connected with said first key retainer and visible when said first key retainer is in the first stored position to facilitate identification of said first key,

and a second key identifier connected with said second key retainer and visible when said second key is in the second stored position to facilitate identification of said second key.

44. An apparatus for storing and positioning a key, said apparatus comprising:

a housing having a slot,

a key mounted for pivotal movement relative to said housing, said key being pivotal relative to said housing between a stored position, a first active position and a second active position, said key being disposed in said slot when said key is in the stored position, said key extends transverse to a longitudinal axis of said slot when said key is in the first active position, said key extends parallel to the longitudinal axis of said slot when said key is in the second active position,

a spring which urges said key away from the stored position toward the first and second active positions, and

an actuator assembly which is manually operable to enable said spring to move said key from the stored position to either the first active position or the second active position.

45. An apparatus as set forth in claim 44 wherein said key is held against pivotal movement relative to said housing when said key is in the first active position and when said key is in the second active position.

46. An apparatus as set forth in claim 44 wherein said actuator assembly includes a control member which is held against rotation relative to said housing, said control member is movable along an axis about which said key pivots relative to said housing to release said key for pivotal movement relative to said housing under the influence of said spring.

47. An apparatus as set forth in claim 44 wherein said actuator assembly includes a control member which engages surfaces connected with said key to block pivotal movement of said key relative to said housing when said key is in said stored position, said first active position and said second active position.

48. An apparatus as set forth in claim 47 wherein said control member is held against pivotal movement relative to said housing during pivotal movement of said key relative to said housing.

49. An apparatus as set forth in claim 44 wherein said actuator assembly includes a control member, said control member engages first surfaces on said housing to block rotation of said control member, said control member engages second surfaces connected with said key to block pivotal movement of said key relative to said housing, said control member being movable out of engagement with said second surfaces to release said key for rotation relative to said housing.

50. An apparatus as set forth in claim 44 further including an electronic unit connected with said housing to enable said key to operate a lock upon insertion of said key into the lock.

51. An apparatus as set forth in claim 44 further including an electronic unit connected with said housing to operate a lock while said key is spaced from the lock.

52. An apparatus for use in storing and positioning a key, said apparatus comprising:

a first housing,

a key mounted for pivotal movement relative to said first housing between a stored condition disposed in a slot in said first housing and an active condition extending away from said first housing,

an actuator disposed adjacent to a first side of said first housing, said actuator being manually actuatable to effect movement of said key between the stored condition and the active condition, and

a remote keyless entry device disposed adjacent to a second side of said first housing opposite from said first side of said first housing, said remote keyless entry device includes a second housing disposed in engagement with said second side of said first housing.

53. An apparatus as set forth in claim 52 further including a magnet connected with one of said first and second housings for attracting an

element connected with another of said first and second housings to interconnect said first and second housings.

54. An apparatus as set forth in claim 52 further including a key retainer connected with said first housing, said key having an end portion connected with said key retainer and a shank portion extending from said end portion of said key, said key retainer being pivotal relative to said first housing to effect movement of said key between said stored condition and said active condition.

55. An apparatus as set forth in claim 52 further including a second key mounted for pivotal movement relative to said first housing between a stored condition disposed in the slot in said first housing and an active condition extending away from said first housing, and a second actuator disposed adjacent to said first side of said first housing, said second actuator being manually actuatable to effect movement of said second key between the stored condition and the active condition.

56. An apparatus as set forth in claim 55 further including a third key mounted for pivotal movement relative to said first housing between a stored condition disposed in the slot in said first housing and an active condition extending away from said first housing, a third actuator disposed adjacent to said first side of said first housing, said third actuator being manually actuatable to effect movement of said third key between the stored condition

and the active condition, a fourth key mounted for pivotal movement relative to said first housing between a stored condition disposed in said second slot in said first housing and an active condition extending away from said first housing, and a fourth actuator disposed adjacent to said first side of said first housing, said fourth actuator being manually actuatable to effect movement of said fourth key between the stored condition and active condition.

57. An apparatus for storing and positioning a key, said apparatus comprising:

a housing,

a key retainer connected with and pivotal relative to said housing,

a key having an end portion disposed in an opening in said key retainer, and

a fastener which extends between said key retainer and said end portion of said key, said fastener being effective to retain said end portion of said key in the opening in said key retainer, said key retainer being pivotal relative to said housing to move said key between a stored condition in which said key is at least partially enclosed by said housing and an active condition in which said key extends away from said housing, said end portion of said key being retained in said opening in said key retainer by said fastener

when said key is in the stored condition and when said key is in the active condition.

58. An apparatus as set forth in 57 wherein aid end portion of said key includes a notch which is engaged by said fastener to retain said end portion of said key in said opening.

59. An apparatus as set forth in claim 57 wherein said fastener presses said end portion of said key against a surface on said key retainer.

60. An apparatus as set forth in claim 57 wherein said key may be in any one of a plurality of active positions when said key is in the active condition, said key having a central axis which extends transverse to a central axis of said housing when said key is in a first one of said active positions, said central axis of said key extends parallel to a central axis of said housing when said key is in a second one of said active positions.